

REMARKS

Claims 1-2 and 4-28 are pending in this application. Claim 3 has been canceled. No claims have been allowed. The Examiner rejected claims 1-2 and 4-28 under 35 U.S.C. § 103 (a) as being unpatentable over Rowe (U.S. Pat. No. 4,075,462) in view of Ortyn et al. (U.S. Pat. No. 6,532,061) and Schwartz (U.S. Pat. No. 6,610,256). The Applicant and the Examiner conducted an Examiner Interview on May 5, 2006, in which no agreement as to the patentability of the claims was reached. An Examiner Interview Summary is attached to this Response.

In this Response, the Applicant has amended the Specification at paragraphs [0020] and [0025] to correct minor typographical errors. The Applicant has amended claim 10 to include the limitation of a “chamber configured to induce a laminar flow”. No new matter within the prohibition of 35 U.S.C. § 132 has been added. The Applicant kindly requests reconsideration and allowance of the pending claims for the reasons detailed below.

A. Principles of Law for Establishing A *Prima Facie* Case of Obviousness

The Applicants first respectfully draw the Examiner's attention to the guidance of the Manual of Patent Examining Procedure (M.P.E.P.) § 2143, under the heading entitled “Basic Requirements of a *Prima Facie* Case of Obviousness”, which provides the following well-accepted principles of law for establishing a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Chapter 2143 of the M.P.E.P. continues under the sub-heading entitled “Suggestion or Modification To Modify the References” with the following guidance on the first basic criteria for establishing a *prima facie* case of obviousness:

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.)...

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art....

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)....

A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art" at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)....

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

B. Overview of Examiner's Rejection Under 35 U.S.C. § 103

The Examiner provided a new ground of rejection to the claims pending in this application in response to the Applicant's Response to the First Office Action faxed December 1, 2005. The new ground of rejection presents a new hypothetical combination of the cited art of Rowe, Ortyn, and Schwartz. As discussed in the Informal Examiner Interview conducted on May 5, 2006, the Applicant respectfully suggests the

Examiner has failed to establish a *prima facie* case of obviousness under his new ground of rejection for independent claims 1, 10, 18 and 25 and the claims that depend on these four independent claims (2 and 4-9, 11-17, 19-24, and 26-28, respectively). As given in M.P.E.P. § 2143, the Examiner must establish some suggestion or motivation, either in the cited references of the hypothetical combination or in the knowledge generally available to one of ordinary skill in the art of microparticle flow sensors to modify the hypothetical combination or to combine the cited reference teachings. The Applicant respectfully submits that the cited references fail to teach the necessary suggestion or motivation as explained below.

1) Rejection of Claims 1-2 and 4-9:

The Examiner rejected claims 1-2 and 4-9 under 35 U.S.C. § 103 (a) as being unpatentable over Rowe (U.S. Pat. No. 4,075,462) in view of Ortyn et al. (U.S. Pat. No. 6,532,061) and Schwartz (U.S. Pat. No. 6,610,256). Specifically, with regard to claim 1, the Examiner concluded that Rowe “does not disclose a laminar flow of fluid. Schwartz discloses a system for analyzing individual microparticle using image processing. The system comprises: a chamber (fig. 25) to induce a laminar flow of fluid (column 19, lines 59-67; column 20, lines 1-15).” The Examiner then concluded that “[i]t would have been obvious to modify Rowe with the laminar flow of fluid to measure individual microparticles easier.”

The Applicant respectfully traverses the Examiner’s assertion related to independent claim 1 as failing to establish a *prima facie* case of obviousness because the cited references do not suggest the desirability of the hypothetical combination. First, the Applicant draws the Examiner’s attention to the cited art of Rowe itself, which states at Column 5, line 1: “The sample chamber is also preferably designed in such manner as to create *turbulence*, due to chamber geometry, which produces a random distribution and orientation of the particles as the sample passes through the sample chamber.” (Emphasis added). Accordingly, the Applicant respectfully submits that the cited art of Rowe actually teaches a preference of having the chamber create “turbulent” flow of fluid. As is well understood by a person of ordinary skill in the pertinent art, “turbulent flow” is essentially the opposite of and is not akin to “laminar flow”. (See, for instance,

the differences given in the respective definitions of these terms found in McGraw-Hill's Dictionary of Scientific and Technical Terms, 3rd Edition). Accordingly, Rowe would appear to suggest to the skilled artisan that a laminar flow chamber is undesirable, i.e., it *teaches away* from the combination proposed by the Examiner.

Further review of the cited art of Rowe and Schwartz reveals additional information suggesting that the skilled artisan would not be motivated to make the hypothetical combination proposed by the Examiner. In particular, a review of Rowe at column 10, lines 44-61 reveals that the particle size described by Rowe in Fig. 5 *starts* at a range of approximately 22-23 microns. Schwartz, on the other hand, teaches a laminar flow chamber shown in Fig. 25 to range from 10-20 microns. As is known by the skilled artisan, a flow chamber with an opening ranging from 10-20 microns would not permit the entry of microparticles larger than 20 microns into the chamber. Accordingly, the hypothetical combination proposed by the Examiner would seemingly change the principle of operation of the cited art of Rowe. The Applicant respectfully submits that the cited art does not suggest the desirability of such a combination.

Moreover, the Examiner's articulated reason for modifying Rowe ("to measure individual microparticles easier") ignores the teachings of Rowe for adjustment of particle size. In particular, Rowe states (at column 11, lines 63-65) that "practical considerations make extension of minimum and maximum particle size range by changing optical elements more desirable" and (at column 12, lines 11-15) that "if the image size of the smallest particle would fall below the minimum required for analysis, the optical system controller will activate the stepping motor 29 causing an appropriate adjustment in lens magnification." Accordingly, the Applicant respectfully suggests that the skilled artisan would understand Rowe to teach that adjustments for the size of *smaller* individual microparticles would be made optically by magnification of the microparticles. In other words, the measurement of individual microparticles would be made easier by *optical magnification*, not by modifying the size of the flow chamber.

Given the hypothetical combination proposed by the Examiner, the Applicant suggests the case at hand is similar to the facts of *In re Fine*, which is cited in the M.P.E.P. at § 2143.01 as follows:

In *In re Fine*, the claims were directed to a system for detecting and measuring minute quantities on nitrogen compounds comprising a gas chromatograph, a converter which converts nitrogen compounds into nitric oxide by combustion, and a nitric oxide detector. The primary reference disclosed a system for monitoring sulfur compounds comprising a chromatograph, combustion means, and a detector, and the secondary reference taught nitric oxide detectors. The examiner and Board asserted that it would have been within the skill of the art to substitute one type of detector for another in the system of the primary reference, however the court found there was no support or explanation of this conclusion and reversed.

As with the case of *In re Fine*, the Examiner has failed to explain a motivation from the cited art to substitute the flow chamber of Rowe with the laminar flow chamber taught by Schwartz. Accordingly, the Applicant respectfully requests the Examiner to withdraw his rejection of independent claim 1 and its dependent claims 2 and 4-9.

2) Claims 10-17:

The Examiner rejected independent claim 10 relying primarily on his rejections to previously presented claim 1 and its dependent claim 5. In response to these rejections, the Applicant has amended claim 10 by describing the chamber as “configured to induce a laminar flow of fluid.” Accordingly, the Applicant also asserts that the argument made previously in Section 1 of these Remarks concerning claims 1-2 and 4-9 is similarly applicable for currently amended independent claim 10 and its dependent claims 11-17. Specifically, the Applicant re-asserts that the cited art fails to teach or suggest the combination proposed by the Examiner. The Applicant respectfully suggests that the Examiner’s rejection of these claims should be withdrawn in light of the argument made to independent claim 1 and the current amendment to independent claim 10.

3) Claims 18-24:

The Examiner rejected independent claim 18 by referring first to the rejection of claim 1 for the system and then stating that the cited art of Ortny “does not disclose

comparing intensities of different images” but does disclose “classifying particles by analyzing different images of the particles (column 18, lines 5-15).” The Examiner then concludes that “it would have been obvious to modify Ortyrn with the claimed comparing step to characterize the particles more accurate (sic, accurately).” The Examiner cites no art in making this conclusion.

The Applicant respectfully traverses the Examiner’s rejection of independent claim 18 because it fails to establish a *prima facie* case of obviousness as given in the argument made previously regarding independent claim 1. Moreover, the Examiner makes an assertion that there is a motivation or suggestion to modify Ortyrn without citing any reference to support this assertion. Instead, the Examiner appears to be citing the Applicant’s own disclosure as the motivation for modifying the cited combination of art. The Applicant reaches this conclusion because the Examiner states “it would have been obvious to modify Ortyrn *with the claimed comparing step* to characterize the particles more accurate (sic, accurately).” The “claimed comparing step” originates from the Applicant’s disclosure, not from any cited art. The Applicant respectfully draws the Examiner’s attention to M.P.E.P. § 2143, which provides that “[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. *In re Vaeck*, 947 F. 2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991).” In other words, the Examiner cannot rely on the Applicant’s disclosure as the motivation for modifying the cited art. Given these deficiencies, the Applicant respectfully requests that the Examiner withdraw the rejection of claim 18 and its dependent claims 19-24.

4) Claims 25-28:

The Examiner rejected independent claim 25 by referring to the rejection of “claim 1 for the system.” In response thereto, the Applicant respectfully traverses the Examiner’s assertion related to independent claim 1 and renews the argument made in these Remarks for independent claim 1 that the Examiner’s proposed combination (now relied upon by the Examiner to reject independent claim 25) fails to establish a *prima facie* case of obviousness as given in M.P.E.P § 2143. The Applicant respectfully suggests that the Examiner’s rejection of claims 25-28 should be withdrawn, thereby

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rendering original independent claim 25 and its dependent claims 26-28 allowable under the cited art.

CONCLUSION

In view of the above Response, the Applicant submits that all pending claims in the instant application are in condition for allowance. The Applicants respectfully request an early action to this end.

Respectfully submitted,

A handwritten signature in cursive script, reading "Kurt G. Hammerle", written in black ink. The signature is positioned above a horizontal line.

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Attachments